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Regional and inter-hospital variations in the use of breast-conserving surgery in the Netherlands between 1990–2000

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Background: Breast-conserving surgery (BCS) is generally considered to be a safe treatment option for the majority of patients with T1 breast tumours (i.e., ≤ 2 cm) and a substantial part of those with T2 tumours (i.e., 2–5 cm).

Material and Methods: We used data of two cancer registries to study the trends in the use of BCS in 10,514 patients with T1 (i.e., ≤ 2.0 cm) and 6961 with T2 (i.e., 2.1–5.0 cm) breast cancer, treated in general hospitals in the southern and eastern part of the Netherlands in the period 1990–2000.

Results: Between 1990 and 2000, the proportion of patients undergoing BCS in the eastern and southern part of the country was 51% and 66% for pT1 cancers and 25% and 37% for pT2 cancers, respectively. In both regions a significant increase was observed in the use of BCS for patients of 70 years or older with T1-tumours; in the early nineties around 30% underwent BCS, whereas in 2000 64% underwent BCS in the southern part of the country and 46% of those in the eastern part. A decrease in the use of BCS was observed in patients <50 years of age, especially for those with T1-tumours in the eastern part of the country (from 71% to 57%). Only in the eastern part of the Netherlands, the use of BCS increased from 50% to 60% for patients of 50 to 70 years (screened age group) of age with T1 breast cancer and from 20% to more than 35% for those with T2 breast cancer. Inter-hospital variations within regions appeared to be larger than the differences between regions. In the period 1996–2000 the use of BCS for patients with T1 tumours varied between 42% (95% CI: 36–48) and 82% (95% CI: 77–86) in the hospitals in the southern part and between 43% (95% CI: 37–49) and 61% (53–68) in the eastern part of the Netherlands. For T2 tumours these proportions were 16% (95% CI: 11–21) versus 63% (95% CI: 56–71) and 24% (95% CI: 18–29) versus 38% (95% CI: 29–46), respectively.

Conclusions: More than 20 years after the introduction of BCS in the Netherlands, large variations still exist between hospitals and regions in the use of this treatment. Differences can be partly explained by the patient's wish, specialist's belief in the treatment and favourable or unfavourable experiences with local recurrence after BCS. More specific guidelines and regular evaluation of adherence to these guidelines and the local recurrence rate in each hospital are needed to attain acceptable variations in the surgical treatment of breast cancer.

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Breast cancer surgery in ambulatory setting

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Background: Ambulatory surgery for breast cancer was introduced over the last two decades. The results were presented in uncontrolled studies using selected populations, or were based on retrospective analyses. The present study evaluates in an unselected group of patients feasibility, effectiveness, safety and acceptability from the patients' perspective for breast cancer surgery in ambulatory setting.

Material and Methods: From October 2001 until September 2002 a prospective cohort study was performed in patients undergoing all types of surgery for primary breast cancer. Patients were included in a patient centred breast cancer care programme in which the patient was given the final decision on when to go home postoperatively.

Results: One hundred twenty-two patients with a mean age of 56 years (sd 11.5, 31–89) underwent 174 operations. One hundred forty-four operations were planned in ambulatory setting, of which 64% succeeded, 31% went home the next morning and 5% stayed 3 days or more. Out of 174 operations 98 were lumpectomies with or without a sentinel node biopsy (SN) 64/98 (65%) went home the day of operation and 30/98 (31%) the next morning. Axillary lymph node dissection with or without a lumpectomy was performed in 28 patients 11/28 (39%) went home the day of surgery and 12/28 (43%) the next morning. Of the 17 patients who underwent a simple mastectomy with or without a SN

10/17 (59%) went home the day of surgery 5/17 (29%) the next morning. Twenty-seven patients had a modified radical mastectomy 7/27 (26%) went home the day of surgery and 11/27 (41%) the next morning. Four patients underwent a bilateral operation and stayed more than 1 night. The mean duration of hospitalisation was 1.8 days per operation. One patient regretted her choice of going home the evening of operation. No complications were recorded related to a shorter hospital stay. Satisfaction score for the total surgical treatment was rated at 8 or higher by 81% of the patients (4% scored 5 or lower).

Conclusions: Breast cancer surgery in ambulatory setting together with a patient centred breast cancer care program is feasible in the whole range of surgical procedures for primary breast cancer. Such a programme is effective, as 86% of the patients returned home within 24 hours after the operation and safe as no increase of complications related to a shorter hospital stay was observed. Patients appreciated the total surgical care in the context of the program.

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Aesthetic evaluation of conservative breast cancer treatment: new scales of agreement or disagreement?

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Background: Subjective assessment of aesthetic result of breast cancer conservative treatment, in spite of being frequently used, has several pitfalls. In this study we tried to ascertain the agreement in the subjective appreciation of breast cancer conservative treatment, assessing different types of classification using the same scale and different distributions.

Material and Methods: Pictures were taken from 55 women submitted to conservative breast cancer treatment and 5 controls with a digital camera in four positions (front arms up and down, left and right side arms up). Previously a score (0–15) was established and the final sum was fitted into one of four classes (bad <3, medium ≥ 3 <8, good ≥ 8 <13 and excellent ≥ 13). In a first round the seven observers gave each case a final score subsequently converted into one of the four classes. In a second round, the seven observers directly classified each case in one of the four classes. The individual agreement between the score classification converted in four classes and the direct classification in four groups was evaluated by the kappa statistic (k), for each of the seven observers. In order to improve the agreement and presuming that the intermediate classes were more difficult to discriminate, we recoded the two previous four classes classifications in three groups, merging the "medium" and "good" classes together and recalculated the kappa statistic (k) for each observer. A last approach was to select new boundaries between classes in order to minimise the difference between the score and the direct classifications. This classification used the difference measured by counting and weighting the mismatched results. Once again the kappa statistic (k) was calculated for the agreement between the score classification and the direct classification.

Results: The agreement between the score classification and the direct classification in four classes for each of the seven observers was very low, k coefficients between 0.26 and 0.59. Calculating the k coefficients for the three classes the values ranged from 0.38 to 0.53. Finally, for the optimized classes again the agreement remained very low, k coefficients between 0.37 and 0.61 for the four classes and between 0.38 and 0.54 for the three classes.

Conclusions: We found poor agreement between observers, regardless of the classification used. Even when optimised classes were used, the agreement between observers did not improve.

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Breast cancer and mammography

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Background: Breast cancer is one of the life threatening problem in women's life. One of its early diagnostic method is mammography which determine masses even less than 0.5 cm in diameter. In order to encourage women to perform mammography, we have to change their attitude and behavioral trends, so their knowledge about health believes is an important issue to be considered.

Objective: to determine Health believes of women about mammography.

Material and Method: This was a comparative cross sectional study. Information gathering means were questionnaire.

Sample: According to eligibility requirement for the study, 360 people were enrolled by continuous sampling and classified into two groups (180 with mammography and 180 without mammography).

Result: Findings showed a significant difference between health beliefs (benefits and barrier, severity and susceptibility to breast cancer) of women who performed mammography.

Conclusion: Research findings indicated a relation between health beliefs and performance of mammography. Result also showed that occupation, level of education, and marital status had relation with susceptibility to breast cancer. As self-breast examination is one of the early diagnostic method in detection of breast cancer therefore, it is recommended further research be done in relation to health belief and self breast examination.

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Is the presence of residual disease after breast conserving treatment predictable?

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Introduction: Tumour positive resection margins are one of the frequently mentioned prognostic factors for local recurrence. In these cases, a re-excision or mastectomy is usually performed in order to improve local control, although the re-excisional specimen is often free of tumour. It was the aim of this study to evaluate tumour characteristics that might be predictive for the presence of residual disease after excisional surgery. The ultimate goal was to define groups in whom additional surgery could be restricted.

Patients and methods: Data of 295 patients, subjected to a wire-guided excisional breast biopsy were studied. Tumour-positive margins were found in 25% of the patients. Type and size of the primary tumour, the presence of DCIS and an extensive in situ component (EIC), multifocality of the tumour and nodal status were considered as possible indicators for residual disease.

Uni- and multivariate statistical evaluation were performed as well as a stepwise logistic regression analysis.

Results: Residual disease was found in 51% of the patients undergoing a re-operation. Altogether 80% of the patients with positive margins (i.e. 20% of all patients intentionally treated by breast conserving therapy) were treated by mastectomy.

Overall, nodal status and the presence of an extensive in situ component were the only two variables that were statistically significant, showing odds ratios of 11 and 4 respectively.

Conclusion: In case of tumour positive margins, axillary involvement and an extensive in situ component in the primary tumour were predictive for residual disease. Consequently, no subgroups could be defined in whom additional surgery could be omitted, but more 'aggressive' surgical therapy is justified in patients belonging to the risk groups.

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Breast conserving surgery versus mastectomy: Iranian surgeons experience

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Low rates of breast conserving surgery (BCS) have been reported in Iran. This study was conducted to evaluate surgeons' preference for the type of breast cancer surgery (BCS vs. mastectomy) and predicting factors. The study population was extracted from the address list of general surgeons provided by Iranian Medical Council. Structured questionnaires were sent by mail to 300 surgeons. The questionnaire posed questions related to the surgeons including demographic data, work experience, practicing in a university hospital, number of breast cancer patients treated per year, preference of surgeon about performing mastectomy versus BCS and the reasons for avoiding BCS. In all, 83 surgeons returned back the completed questionnaire. The response rate was 27%. The results showed that only 19% of surgeons were performing BCS in their routine practice. The only predicting factor of performing BCS was the total number of breast cancer patients treated yearly by the surgeon ($P=0.01$). There was no association between above mentioned variables and the use of BCS. The most frequent reasons noted for avoiding BCS were uncertainty about conservative therapy results (46%), uncertainty about the quality of available radiotherapy services (32%) and the probability of patients' in compliance for radiotherapy (32%).

In conclusion, BCS is not routinely selected by Iranian surgeons as the first and the best treatment modality. Further research for evaluating patients' outcome treated by BCS in Iran, with regard to available medical facilities and cultural factors (patients' compliance) is recommended.

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Use of reduction mammoplasty techniques in breast cancer conservation therapy

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Background: The use of reduction mammoplasty techniques for tumor quadrantectomy in case of unfavourable tumor – breast size ratio or tumor location may increase breast conservation rate and improve the cosmetic outcome of breast cancer surgery.

Patients: From January 1997 to March 2003 55 women (mean age: 59 years, premenopausal: 15 patients) with 59 breast cancers (4 patients had bilateral cancers) underwent tumor quadrantectomy carried out as reduction mammoplasty (and Sentinel node biopsy/axillary dissection). 10 of 55 patients had preoperative hormone (n=2) or chemotherapy (n=8) to decrease tumor size.

Results: There were 11 intraductal carcinomas with a mean (range) size of 35.4 mm (11–60 mm) and 46 patients with invasive carcinoma with a mean (range) size of 21.2 mm (y0–140 mm), one patient each had microinvasive cancer with DCIS and Paget carcinoma.

Reduction mammoplasties were performed unilateral (n=8) or bilateral (n=41), 6 patients with unilateral surgery had reduction of the contralateral breast following a time interval of 6–15 months. In 55 patients 102 reduction mammoplasties were performed and were Lejour reduction (n=11), superior pedicle mammoplasty (n=21), superior pedicle mammoplasty with deepithelialized rotation flap (n=5), inferior pedicle mammoplasty (n=44), inferior pedicle mammoplasty with deepithelialized island flap (n=11), central reduction mammoplasty (n=2) and central reduction with deepithelialized rotation flap (n=8). Mean (range) specimen weight was 267 g (39–1090 g), mean duration of surgery was 178 minutes. None of the histologic specimen revealed positive margins. In 4 of 55 patients bilateral cancer was diagnosed prior to surgery. In 3 of 51 patients (5.8%) an occult cancer was found in the histologic specimen of the contralateral breast (intraductal carcinoma, microinvasive and papillary carcinoma).

There were 5 postoperative complications: fatty tissue necrosis in 2 patients and delayed wound healing in 3 patients. After a median follow-up of 28 months (range 6–72 months) there were no local recurrences in the breast or axilla, one patient developed bone metastases. The postoperative cosmetic result evaluated by the patients was rated as excellent in 44/55 (80%) and good in 11/55 (20%) with no poor result. Mean postoperative cosmetic result as evaluated by 4 independent investigators on a visual analogue scale on 1 (bad result) to 10 (excellent result) was 8.7 (range 5–10).

Conclusion: Tumor quadrantectomy combined with reduction mammoplasty was performed when tumor size in relation to breast volume or tumor location suggested a poor cosmetic outcome. Tumor quadrantectomy performed as part of reduction mammoplasty resulted in an oncologic result comparable to quadrantectomy alone but was associated with a superior aesthetic result.

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Follow up result of BCT in advanced breast cancer – an Indian experience

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Aim: To see, short term and long term result in survival pattern of disease progression after breast conservative treatment in locally advanced breast cancer.

Material and Methods: Nine hundred and sixty five (965) women with locally advanced breast cancer were treated from 1989 to 1998 at Medical College Hospital, Kolkata, India. Seventy-two (72) women underwent quadrantectomy with axillary dissection and post-op radiotherapy (Study group). Eight hundred and ninety three (893) women underwent different variety of radical mastectomy (control group). Women of both the groups received neo-adjuvant and/or adjuvant therapy. The median follow up period was 48 months.

Results: In study group (BCT), local recurrence and distant metastasis were 9 (12.5%) and 15 (20.8%) respectively. Death within 5 year in this group were 11 (15.2%). In the second group, the corresponding figure were 116 (12.9%) and 168 (18.8%). Death within 5 years in this group 151 (16.9%). The five years survival and overall survival rate were comparable in both the groups.

Conclusion: Conservative treatment (Quadrantectomy + axillary dissection + radiotherapy) is an alternative method of treatment for patients of